UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF MICHIGAN

Horizon Global Americas Inc.	Case No. 2:17-cv-11879
Plaintiff,	Judge Avern Cohn Magistrate Stephanie Dawkins Davis
V.	S I
	SECOND AMENDED COMPLAINT
Curt Manufacturing, LLC	
	Demand for Jury Trial
Defendant.	
	/
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Matthew J. Cavanagh (OH 0079522)	
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Second Amended Complaint

For its second amended complaint against defendant Curt Manufacturing, LLC ("Curt"), plaintiff Horizon Global Americas Inc. ("Horizon") states:

Summary of Case

- 1. This is an action for damages and injunctive relief to remedy the infringement by Curt of U.S. Patent Nos. 9,522,583 ("the '583 patent"), 8,360,458 ("the '458 patent"), 8,215,658 ("the '658 patent"), 9,248,713 ("the '713 patent"), 9,592,863 ("the '863 patent"), 8,179,142 ("the '142 patent"), 6,068,352 ("the '352 patent"), and 6,012,780 ("the '780 patent"). Collectively, the '583, '458, '658, '713, '863, '142, '352, and '780 patents are the "Patents."
- 2. The Patents are directed to equipment for the towing industry, including improved fifth wheel hitch devices, unique devices for securing trailer safety chains to towing vehicles, improved trailer signal converters, and improved trailer brake controllers.

The Parties

3. Horizon is a Delaware corporation with a principal place of business in Michigan.

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4. Curt is a Delaware limited liability company with a principal place of business in Wisconsin.

<u>**Jurisdiction and Venue**</u>

- 5. This Court has subject matter jurisdiction over Horizon's patent infringement claims under 28 U.S.C. § 1331 and § 1338 because it arises under federal law.
- 6. This Court has personal jurisdiction over Curt on various grounds, including (without limitation) because it has offered to sell and, upon information and belief, has actually sold products infringing the Patents in Michigan; it has intentionally caused tortious harm to Horizon in Michigan resulting from its infringing activities, with knowledge that such harm would be sustained by Horizon in Michigan; it has a physical presence in Michigan, including a physical warehouse and engineering facility; upon information and belief, it has regularly solicited business in Michigan, engaged in a persistent course of conducting business in Michigan, and derived substantial revenue from goods sold in Michigan; and Curt appeared before this Court and asserted a counterclaim.
- 7. Venue is proper under 28 U.S.C. § 1400 because Curt has committed acts of infringement in this district, and it has a regular and

established place of business in this district. Curt sells products in this district through online stores, including Amazon.com and etrailer.com, and through many brick-and-mortar dealers, installers, and retailers in this district. Furthermore, Curt has a physical warehouse and engineering facility, staffed by Curt employees and engineers, in Wixom, Michigan.

Relevant Facts

I. <u>Horizon's Legal Rights</u>

- 8. Since around 1950, Horizon and its predecessors and affiliates have continually designed, produced, manufactured, and marketed a wide array of towing and trailer hitch products and accessories for trailer equipment manufacturers, wholesaler-distributors, and retail markets.
- 9. Under its popular *Reese*, *Tekonsha*, and other brands, Horizon (and its predecessors) has been a market leader for towing products for decades.
 - 10. The '583 patent issued on December 20, 2016.
 - 11. The '458 patent issued on January 29, 2013.
 - 12. The '658 patent issued on July 10, 2012.
 - 13. The '713 patent issued on February 2, 2016.
 - 14. The '863 patent issued on March 14, 2017.

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- 15. The '142 patent issued on May 15, 2012.
- 16. The '352 patent issued on May 30, 2000.
- 17. The '780 patent issued on January 11, 2000.
- 18. The '583, '458, and '658 patents are directed to unique devices and apparatuses for securely and conveniently tying things (*e.g.*, safety chains) to towing vehicles.
- 19. The '713 patent is directed to unique devices that can be used to secure a safety chain in gooseneck hitch applications.
 - 20. The '863 patent is directed to improved fifth wheel hitch devices.
 - 21. The '142 patent is directed to improved trailer signal converters.
- 22. The '352 and '780 patents are directed to improved trailer brake controllers.
 - 23. Horizon is the exclusive owner of the Patents.

II. Curt's Infringement of the Patents

24. Curt is making, importing, using, selling, and/or offering to sell products in the United States that: (a) are covered by one or more claims of the '583, '458, and '658 patents, including, without limitation, the Curt OEM-compatible gooseneck safety chain anchors (part nos. 60617, 60608, 60691, 60618, and 60692 and OEM part number 84000862); (b) are covered by one

or more claims of the '713 patent, including, without limitation, the Curt OEM-Style Gooseneck Hitch for Ram (part no. 60613); (c) are covered by one or more claims of the '863 patent, including, without limitation, the Curt OEM-compatible and after-market Q-Series 5th Wheel Hitches and A-series 16K and 20K 5th Wheel Hitches (including part no. 16120 and 16026); (d) are covered by one or more claims of the '142 patent, including, without limitation, the OEM Curt Trailer Signal Converters used on FCA Jeep Renegade vehicles (MY2015 part no. 82215047, manufacturer part nos. 82215047AB and 82214685AC) and Curt after-market Trailer Signal Converters (part nos. 56200 and 56210); and (e) are covered by one or more claims of the '352 and '780 patents, including, without limitation the Curt Triflex brake control (part. no. 51140). Collectively, the infringing Curt products are the "Infringing Products."

25. Among its various methods of sale, Curt has been selling the Infringing Products through online stores, including, without limitation, Amazon.com and etrailer.com. Customers in Michigan and other states can order the Infringing Products from those online stores, which the stores will ship to any address in the United States, including in Michigan.

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26. Curt's website also identifies numerous brick-and-mortar dealers, retailers, and installers in Michigan that sell the Infringing Products.

Count One

Infringement of the '583 patent

- 27. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 28. The '583 patent is a continuation-in-part of the application that matured into the '458 patent.
- 29. Curt has directly infringed, and continues to directly infringe, the '583 patent at least by selling, offering to sell, using, making and/or importing gooseneck safety chain anchors, including (without limitation) part nos. 60617, 60608, 60609, and 60691 and OEM part no. 84000862 (collectively, the "Infringing Anchors").
- 30. As an illustrative example shown below, part no. 60608 (which functions in materially the same way as the other Infringing Anchors) has each of the limitations in claim 1 of the '583 patent. The drawings in the chart are copied from Curt's Installation Instructions for the product (available at https://assets.curtmfg.com/masterlibrary/60608/ installsheet/ CM_60608_INS.pdf), and the photo is of the product itself.

Element on Infringing Product
Curt's website (www.curtmfg.com/part/
60608) and the name of the product itself
confirm that the anchor is for securing a
gooseneck trailer safety chain.1
Curt's instructions show that the anchor is
rotatable about an axis between two
positions within a receiving member:
Figure 3 Rear-most under-bed mount (both sides) Figure 4 body member rotating from first to second rotational positions Figure 5

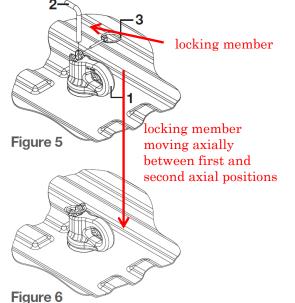
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¹ At this stage, Horizon has not taken a position as to whether the preamble in any asserted claim is limiting, and it reserves its right to consider that question during the claim construction stage if there is a material dispute over that issue. If any of the preambles are limiting, they are met as to each of the products accused under each patent.

Claim Limitation

a locking member extending through the body member and being axially moveable relative to the body member between first and second axial positions, wherein the locking member in the second axial position prevents rotation of the body member from the second rotational position to the first rotational position and the locking member is prevented from moving from the first axial position to the second axial position until the body member is rotated from the first rotational position to the second rotational position.

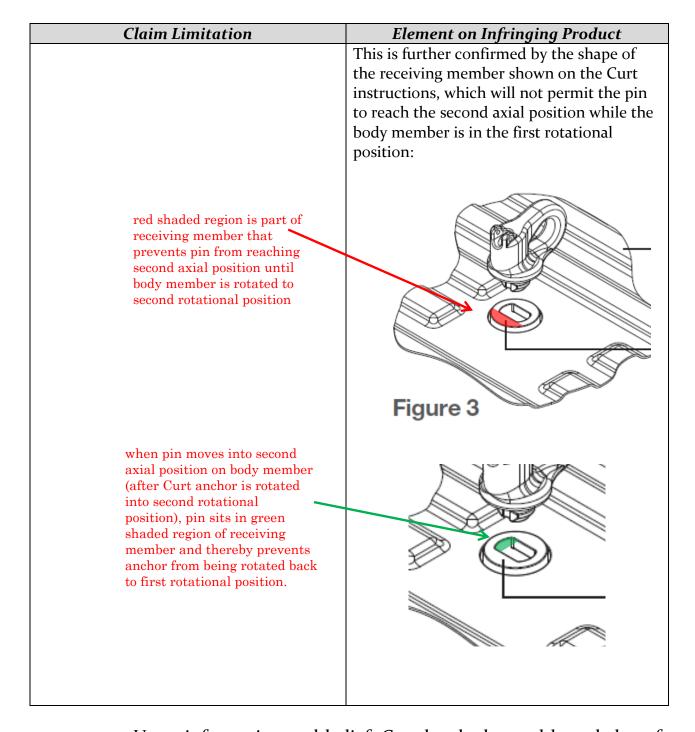
Element on Infringing Product



The locking member, when in second axial position, prevents the body member from rotating within the receiving member:



The Curt anchor must be rotated into the second rotational position before the locking member can be moved into the second axial position, which is confirmed by Curt instructing customers to rotate the anchor 90° before fully inserting the locking member (a 10 mm pin).



31. Upon information and belief, Curt has had actual knowledge of the '583 patent and actual knowledge that its Infringing Anchors infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Anchors. Upon

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information and belief, Curt knew about the '583 patent prior to this lawsuit at least because: (a) two of its patents (U.S. Patent Nos. 9,452,647 and 8,925,952) cite to Horizon patents (U.S. Patent No. 8,215,658 and 8,360,458) that are related to the '583 patent and which expressly claim priority to the same parent application (12/578,978) as the '583 patent; and (b) Curt and Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's safety chain tie down product, which is marked with the '583 patent in accordance with 35 U.S.C. § 287(a), and given the December 20, 2016 issuance of the '583 patent that covers the products.

- 32. Each of the Infringing Anchor's only commercial use is as a safety chain tie down device.
- 33. Any use of the Infringing Anchors as a safety chain tie down device is an act of direct infringement of the '583 patent.
- 34. Because the sole intended use of the Infringing Anchors is an infringing use, the Infringing Anchors have no substantial non-infringing uses.

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- 35. Curt has induced infringement of the '583 patent at least because, with knowledge of the '583 patent, it intentionally and actively induced end users of the Infringing Anchors (through instructions, videos, and otherwise) to use them in a manner that infringes the '583 patent with specific intent that they do so.
- 36. Curt has further induced infringement of the '583 patent at least by selling the Infringing Anchors to distributors, retailers, and other resellers with specific intent that they infringe the '583 patent by reselling the Infringing Anchors to others.
- 37. Curt has contributed to infringement of the '583 patent at least by selling the Infringing Anchors, which have no substantial use other than an infringing use as either chain tie down devices for towing applications.
- 38. Curt's infringements of the '583 patent were, and continue to be, willful and deliberate.
- 39. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

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Count Two

Infringement of the '458 patent

- 40. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 41. The '458 patent is a continuation of the application that matured into the '658 patent.
- 42. Curt's Infringing Anchors, described above, indirectly infringe the '458 patent.
- 43. The direct infringement of the '458 patent occurs, at least, when end users use the Infringing Anchors with an OEM underbed puck system, such as those provided with Ford trucks.
- 44. Use of the Infringing Anchors with an underbed system having a rail, socket, and mid rail directly infringes at least claim 1 of the '458 patent. As an illustrative example shown below, part no. 60609 (which functions in materially the same way as the other Infringing Anchors) has each of the limitations in claim 1 of the '458 patent in operation.

Claim Limitation	Element on Infringing Product
1. A hitch mounting system	Curt's website (www.curtmfg.com/part/
comprising:	60609) confirms that the anchor set is designed to be used for mounting and securing a gooseneck hitch application.

Claim Limitation	Element on Infringing Product
at least one rail capable of being connected to a vehicle frame;	At least as to Ford pickup trucks, which Curt's website says its #60609 product must be used with, ² the OEM-supplied underbed "puck" system has "at least one rail capable of being connected to a vehicle frame," which is not visible but shown in blue dotted line below:
	(pic from Curt's website, www.curtmfg.com/part/60609)
at least one socket formed in the at least one rail;	As shown in the picture above (red arrows), the Curt anchors sit in the sockets formed in the side rails under the pickup truck's bed.
a mid rail connected to the at least one rail, wherein the mid rail includes a hitch ball socket;	As shown in the picture above, the underbed of at least the Ford pickup has a mid rail (dotted yellow lines) connected to the side rails. The mid rail has a hitch ball socket (green arrow).

² See www.curtmfg.com/part/60609 ("Requires Ford puck system for installation.").

Claim Limitation	Element on Infringing Product
a receiving member capable of being secured to the at least one socket;	Truck bed receiving member Rear-most under-bed mount (both sides)
	(from Curt installation instructions, available at www.curtmfg.com/part/60609) The receiving member is part of OEM-supplied underbed puck system.
a body member capable of	The Curt safety chain anchors (green arrow above)
being inserted into the	are the body members capable of being inserted into
receiving member;	the receiving member, as shown above.

{7250811:} 15

Claim Limitation

a locking member extending through the body member, wherein rotating the body member in a direction displaces the locking member perpendicular to the direction of rotation engaging the locking member with the receiving member.

Element on Infringing Product



locking member is silver, L-shaped pin





rotating the body member about its longitudinal axis within the receiving member displaces the locking member in a downward direction perpendicular to the direction of rotation

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- Upon information and belief, Curt has had actual knowledge of 45. the '458 patent and actual knowledge that its Infringing Anchors infringe that patent when they are manufactured, used, imported, sold, or offered for sale with an underbed puck system. Yet Curt has continued to sell the Infringing Anchors. Upon information and belief, Curt knew about the '458 patent prior to this lawsuit at least because: (a) two of its patents (U.S. Patent Nos. 9,452,647 and 8,925,952) cite to the '458 patent; and (b) Curt and Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's safety chain tie down product, which is marked with the '458 patent in accordance with 35 U.S.C. § 287(a), and given the January 29, 2013 issuance of the '458 patent that covers the products.
- 46. Each of the Infringing Anchor's only commercial use is as a safety chain tie down device with an underbed puck system.
- 47. Any use, sale, or offer of sale of the Infringing Anchors as a safety chain tie down device with an underbed puck system is an act of direct infringement of the '458 patent.

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- 48. Because the sole intended use of the Infringing Anchors is an infringing use, the Infringing Anchors have no substantial non-infringing uses.
- 49. Curt has induced infringement of the '458 patent at least because, with knowledge of the '458 patent, it intentionally and actively induced end users of the Infringing Anchors (through instructions, videos, and otherwise) to use them in a manner that infringes the '458 patent with specific intent that they do so.
- 50. Curt has contributed to infringement of the '458 patent at least by selling the Infringing Anchors, which have no substantial use other than an infringing use as chain tie down devices for towing applications.
- 51. Curt's infringements of the '458 patent were, and continue to be, willful and deliberate.
- 52. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

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Count Three

Infringement of the '658 patent

- 53. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 54. Curt's Infringing Anchors, described above, indirectly infringe the '658 patent.
- 55. The direct infringement of the '658 patent occurs, at least, when end users use the Infringing Members with an OEM underbed puck system, such as those provided with Ford trucks.
- 56. Use of the Infringing Anchors with an underbed system having a receiving member directly infringes at least claim 1 of the '658 patent. As an illustrative example shown below, part no. 60609 (which functions in materially the same way as the other Infringing Anchors) has each of the limitations in claim 1 of the '658 patent in operation.

Claim Limitation	Element on Infringing Product
1. A tie down apparatus for	Curt's website (www.curtmfg.com/part/
securing an item, said tie down apparatus comprising:	60609) confirms that the anchor set is designed to be used for tying down and securing a gooseneck hitch
	application.

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Claim Limitation	Element on Infringing Product
a receiving member having an opening located there through;	receiving member Rear-most under-bed mount (both sides) (from Curt installation instructions, available at www.curtmfg.com/part/60609) The receiving member is part of OEM-supplied
a tie down member having at least one aperture,	underbed puck system. The tie down member has an aperture through its body: aperture through tie down Figure 5 (from Curt installation instructions, available at www.curtmfg.com/part/60609)

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Claim Limitation	Element on Infringing Product
wherein said tie down member is capable of being located and rotated within said receiving member about an axis;	The tie down is placed in tie down member and rotated: Figure 6
	(from Curt installation instructions, available at www.curtmfg.com/part/60609)
a locking member having at least one leg capable of being housed within said at least one aperture;	locking member is silver, L-shaped pin

{72508ii:} **21**

Claim Limitation

wherein upon rotation of said tie down member said locking member moves axially perpendicular relative to said axis of rotation of said tie down member engaging said receiving member, thereby trapping the tie down member to the receiving member.

Element on Infringing Product





rotating the body member about its longitudinal axis within the receiving member displaces the locking member in a downward direction perpendicular to the direction of rotation

57. Upon information and belief, Curt has had actual knowledge of the '658 patent and actual knowledge that its Infringing Anchors infringe that patent when they are manufactured, used, imported, sold, or offered for sale with an underbed puck system. Yet Curt has continued to sell the Infringing Anchors. Upon information and belief, Curt knew about the '658 patent prior to this lawsuit at least because: (a) two of its patents (U.S. Patent Nos. 9,452,647 and 8,925,952) cite to the '658 patent; and (b) Curt and

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Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's safety chain tie down product, which is marked with the '658 patent in accordance with 35 U.S.C. § 287(a), and given the July 10, 2012 issuance of the '658 patent that covers the products.

- 58. Each of the Infringing Anchor's only commercial use is as a safety chain tie down device to be used with receiving members on OEM underbed puck systems.
- 59. Any use of the Infringing Anchors as a safety chain tie down device with receiving members in an underbed system is an act of direct infringement of the '658 patent.
- 60. Because the sole intended use of the Infringing Anchors is an infringing use, the Infringing Anchors have no substantial non-infringing uses.
- 61. Curt has induced infringement of the '658 patent at least because, with knowledge of the '658 patent, it intentionally and actively induced end users of the Infringing Anchors (through instructions, videos,

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and otherwise) to use them in a manner that infringes the '658 patent with specific intent that they do so.

- 62. Curt has contributed to infringement of the '658 patent at least by selling the Infringing Anchors, which have no substantial use other than an infringing use as chain tie down devices for towing applications.
- 63. Curt's infringements of the '658 patent were, and continue to be, willful and deliberate.
- 64. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

Count Four

Infringement of the '713 patent

- 65. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 66. Curt has directly infringed, and continues to directly infringe, the '713 patent at least by selling, offering to sell, using, making and/or importing safety chain tie-downs, including (without limitation) the Curt OEM-Style Gooseneck Hitch for Ram, part no. 60613 (collectively, the "Infringing Tie-Downs").

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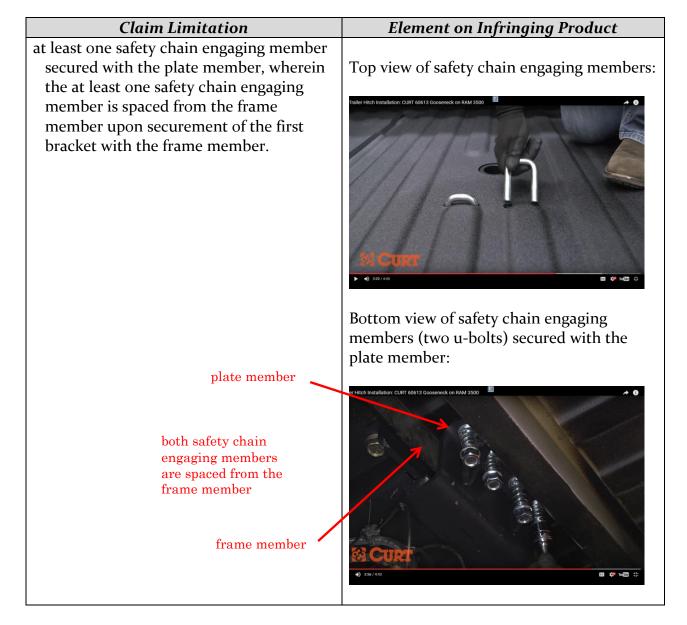
67. As an illustrative example of Curt's infringement, part no. 60613 has each of the limitations in claim 1 of the '713 patent. The images in the chart below are screenshots from Curt's installation video for the product (available at http://www.curtmfg.com/part/60613).

Claim Limitation	Element on Infringing Product
1. A safety chain engaging device for a	Curt's website (www.curtmfg.com/part/
towing vehicle having a gooseneck hitch	60613) confirms that the Infringing Tie-
attached with transversely extending frame	Downs are for securing a gooseneck trailer
member of the towing vehicle, the safety	safety chain.
chain engaging device comprising:	
a first bracket configured to be secured	Curt's installation video shows the product
with the frame member of the towing	has a first bracket as claimed:
vehicle and having at least a portion	
thereof configured to be disposed	Trailer Hitch Installation: CURT 66613 Gooseneck on RAM 3500
axially beneath the frame member upon	
securement of the first bracket with the	
frame member;	
frame member of the towing vehicle	
the towing venicle	
first bracket, secured	E CURT /
to frame with bolts (shown) and nut	► • 300/443
plates (not shown)	

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a second bracket attached with the first bracket, the second bracket including a plate member spaced from the first bracket such that at least a portion of the frame member is configured to be positioned between the plate member and the first bracket; and Second bracket Second bracket

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68. Upon information and belief, Curt has had actual knowledge of the '713 patent and actual knowledge that its Infringing Tie-Downs infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Tie-Downs. Upon information and belief, Curt knew about the '713 patent prior to this lawsuit at least because Curt and Horizon are head-to-head competitors in the hitch

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product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's safety chain tie down products, which are marked with the '713 patent in accordance with 35 U.S.C. § 287(a), and given the February 2, 2016 issuance of the '713 patent that covers the products.

- 69. Each of the Infringing Tie-Downs' only commercial use is as a safety chain tie down device.
- 70. Any use of the Infringing Tie-Downs as a safety chain tie down device is an act of direct infringement of the '713 patent.
- 71. Because the sole intended use of the Infringing Tie-Downs is an infringing use, the Infringing Tie-Downs have no substantial non-infringing uses.
- 72. Curt has induced infringement of the '713 patent at least because, with knowledge of the '713 patent, it intentionally and actively induced end users of the Infringing Tie-Downs (through instructions, videos, and otherwise) to use them in a manner that infringes the '713 patent with specific intent that they do so.

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- 73. Curt has further induced infringement of the '713 patent by selling the Infringing Tie-Downs to distributors, retailers, and other resellers with specific intent that they infringe the '713 patent by reselling the Infringing Tie-Downs to others.
- 74. Curt has contributed to infringement of the '713 patent at least by selling the Infringing Tie-Downs, which have no substantial use other than an infringing use as chain tie down devices.
- 75. Curt's infringements of the '713 patent were, and continue to be, willful and deliberate.
- 76. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

Count Five

Infringement of the '863 patent

- 77. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 78. Curt has directly infringed, and continues to directly infringe, the '863 patent at least by selling, offering to sell, using, making and/or importing fifth wheel hitches with isolation systems including (without

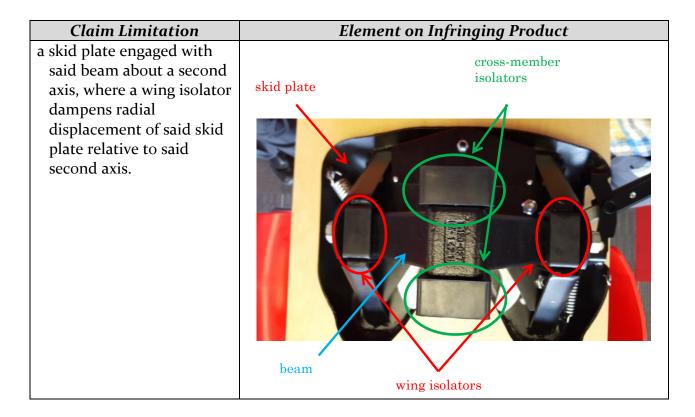
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limitation) the Q-Series and A-Series 16K and 20K 5th Wheel Hitches (collectively, the "Infringing Hitches").

79. As an illustrative example, part no. 16120 has each of the limitations in claim 1 of the '863 patent. The drawings in the chart are copied from Curt's Installation Instructions for the product (available at https://assets.curtmfg.com/masterlibrary/16120/installsheet/CM_16120_INS. pdf), and the photo is of the product itself.

Claim Limitation	Element on Infringing Product
1. A fifth wheel hitch	Curt's website (www.curtmfg.com/part/
comprising:	16120) and the name of the product itself confirm that the
	product is a fifth wheel hitch.
at least one support frame capable of engagement with a towing vehicle;	support frame that attaches to the tow vehicle's mounting rails Figure 24

Claim Limitation	Element on Infringing Product
a cross-member attached to said at least one support frame;	cross-member Figure 24
an isolation system operatively coupled with said cross-member, said isolation system comprising: a beam engaged with said cross- member about a first axis, wherein a cross-member isolator dampens longitudinal displacement of said beam generally along said first axis; and	a beam engaged with cross-member cross-member isolator



80. Upon information and belief, Curt has had actual knowledge of the '863 patent and actual knowledge that its Infringing Hitches infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Hitches. Upon information and belief, Curt knew about the '863 patent prior to this lawsuit at least because Curt and Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's fifth wheel hitch products, which are marked with the '863 patent in accordance with 35 U.S.C. § 287(a),

and given the March 14, 2017 issuance of the '863 patent that covers the products.

- 81. Each of the Infringing Hitches' only commercial use is as a fifth wheel hitch device.
- 82. Any use of the Infringing Hitches as a fifth wheel hitch device is an act of direct infringement of the '863 patent.
- 83. Because the sole intended use of the Infringing Hitches is an infringing use, the Infringing Hitches have no substantial non-infringing uses.
- 84. Curt has induced infringement of the '863 patent at least because, with knowledge of the '863 patent, it intentionally and actively induced end users of the Infringing Hitches (through instructions, videos, and otherwise) to use them in a manner that infringes the '863 patent with specific intent that they do so.
- 85. Curt has further induced infringement of the '863 patent at least by selling the Infringing Hitches to distributors, retailers, and other resellers with specific intent that they infringe the '863 patent by reselling the Infringing Hitches to others.

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- 86. Curt has contributed to infringement of the '863 patent at least by selling the Infringing Hitches, which have no substantial use other than an infringing use as a fifth wheel hitch device.
- 87. Curt's infringements of the '863 patent were, and continue to be, willful and deliberate.
- 88. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

Count Six

Infringement of the '142 patent

- 89. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 90. Curt has directly infringed, and continues to directly infringe, the '142 patent at least by selling, offering to sell, using, making and/or importing trailer signal converters, including (without limitation) part nos. 56200 and 56210, as well as converters sold to OEMs having manufacturer part nos. 82215047AB and 82214685AC (collectively, the "Infringing Signal Converters").

{7250811:} 34

91. An illustrative example shown below, part no. 56200 (which functions in materially the same way as the other Infringing Signal Converters) has each of the limitations in claim 1 of the '142 patent.

Claim Limitation	Element on Infringing Product
1. A signal converter	Curt's website (http://www.curtmfg.com/part/56200) and the
comprising:	name of the product itself confirm that the product is a signal
	converter.
a power supply;	The Curt converter boxes include an onboard power supply that receives power from the vehicle battery.
	*BUTT CONNECTOR *BLACK-"TO BATTERY POWER SUPPLY" WHITE -"GROUND" (SECURE TO TOW VEHICLE FRAME USING SCREW PROVIDED.) (from Curt installation instructions, available at www.curtmfg.com/part/56200)

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Claim Limitation	Element on Infringing Product
a microcontroller	Curt's website (http://www.curtmfg.com/part/56200) describes
connected to said	the product as having a microcontroller as claimed. For
power supply, said	example: "This CURT electrical converter is designed to convert
microcontroller	an ST (stop/tail) pulse width modulation (PWM) system to a 2-
configured to receive a	wire system and provides a standard 4-way flat connector socket
plurality of input	to plug in your trailer."
signals related to lamp	
lights of a first vehicle	
from said first vehicle,	
and output a plurality	
of output signals	
related to one or more	
vehicle lamp light	
loads of a second	
vehicle;	
a current sensing	Investigation and testing of the accused product shows the
device connected to	product has a current sensing device as claimed. On information
said microcontroller to	and belief, the software code and schematics for the products
monitor current flow	should be produced by Curt in discovery and will further
at said loads; and	demonstrate this element is met.
wherein, said	Investigation and testing of the accused product shows the
microcontroller is	product has a current sensing device as claimed. On information
capable of reducing	and belief, the software code and schematics for the products
the duty cycle of one	should be produced by Curt in discovery and will further
or more of said output	demonstrate this element is met.
signals in response to	
said current flow rising	
above a first	
predetermined	
threshold.	

92. Upon information and belief, Curt has had actual knowledge of the '142 patent and actual knowledge that its Infringing Signal Converters infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Signal Converters. Upon information and belief, Curt knew about the '142 patent

prior to the lawsuit at least because Curt and Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's trailer signal converter product, and given the May 15, 2012 issuance of the '142 patent that covers the products.

- 93. Each of the Infringing Signal Converter's only commercial use is as a trailer signal converter.
- 94. Any use of the Infringing Signal Converters as a trailer signal converter is an act of direct infringement of the '142 patent.
- 95. Because the sole intended use of the Infringing Signal Converters is an infringing use, the Infringing Signal Converters have no substantial non-infringing uses.
- 96. Curt has induced infringement of the '142 patent at least because, with knowledge of the '142 patent, it intentionally and actively induced end users of the Infringing Signal Converters (through instructions, videos, and otherwise) to use them in a manner that infringes the '142 patent with specific intent that they do so.

- 97. Curt has further induced infringement of the '142 patent at least by selling the Infringing Signal Converters to distributors, retailers, and other resellers with specific intent that they infringe the '142 patent by reselling the Infringing Signal Converters to others.
- 98. Curt has contributed to infringement of the '142 patent at least by selling the Infringing Signal Converters, which have no substantial use other than an infringing use as trailer signal converters.
- 99. Curt's infringements of the '142 patent were, and continue to be, willful and deliberate.
- 100. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparable injured unless the infringing activities are enjoined by this Court.

Count Seven

Infringement of the '352 patent

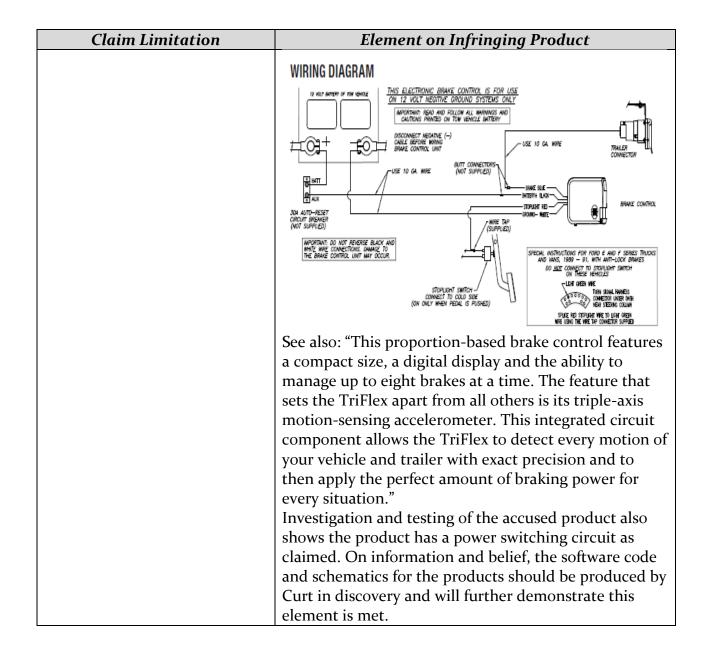
- 101. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 102. Curt has directly infringed, and continues to directly infringe, the '352 patent at least by selling, offering to sell, using, making and/or importing

brake controllers, including (without limitation) the Curt Triflex brake control part no. 51140 (collectively, the "Infringing Brake Controllers").

103. As an illustrative example shown below, part no. 51140 (which functions in materially the same way as the other Infringing Brake Controllers) has each of the limitations in claim 1 of the '352 patent. The drawings in the chart are copied from Curt's Installation Instructions for the product (available at https://assets.curtmfg.com/masterlibrary/51140/installsheet/CME_51140_INS.PDF).

Claim Limitation	Element on Infringing Product	
1. A brake controller for	Curt's website (http://www.curtmfg.com/part/51140)	
controlling the brakes of a	and the name of the product itself confirm that the	
towed vehicle, said brake	controller is for controlling the brakes of a towed	
controller comprising:	vehicle.	
an input circuit for generating a	Curt's website confirms the product has an input	
brake level signal representing	circuit as claimed. For example: "This proportion-based	
the braking force to be applied	brake control features a compact size, a digital display	
by the towed vehicle's brakes;	and the ability to manage up to eight brakes at a time.	
	The feature that sets the TriFlex apart from all others is	
	its triple-axis motion-sensing accelerometer. This	
	integrated circuit component allows the TriFlex to	
	detect every motion of your vehicle and trailer with	
	exact precision and to then apply the perfect amount of	
	braking power for every situation."	
	Investigation and testing of the accused product also	
	shows the product has an input circuit as claimed. On	
	information and belief, the software code and	
	schematics for the products should be produced by	
	Curt in discovery and will further demonstrate this	
	element is met.	
a display circuit including a	Curt's website states and shows the product has a	
plurality of indicator lights;	display circuit with a plurality of indicator lights. So	
	does the instruction sheet.	

Claim Limitation	Element on E	Infringing Product
		FINFLES L.E.
	Digital Display The digital display shows the output settin to setup and monitor the brake control and	
	Blank display, does not illuminate when control is activated, check installation	Flashing, trailer disconnected, off after 60 seconds
	Blank display, standby mode, illuminates when control is activated	Recalibration needed, unplug and replug trailer connector
	Standby mode, no trailer connected	C.L. Calibrating
	Standby mode, trailer connected	Overloaded output circuit, trailer brake system fault
	2.0. Brakes activated	L.B. Low voltage, tow vehicle system
	Z.D. Flashing, output adjustment mode	R.E. Accelerometer error, powers brakes using default values
	L.2. Flashing, sensitivity adjustment mode	E. I. Stoplight wire (red) shorted to ground
	Trailer connected, checking calibration	Battery power just connected or engine cranking PAGE 7
a power switching circuit and adapted for coupling to the brakes of the towed vehicle and to the power supply of the towing vehicle, for selectively supplying power from the towing vehicle power supply to the brakes of the towed vehicle in response to a switching control signal supplied to a control input terminal;		iction sheet state and show the tching circuit as claimed. For



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Claim Limitation	Element on Infringing Product
a current sensing circuit for	Curt's website and instruction sheet state and show the
sensing a level of braking	product has a current switching circuit as claimed. For
current supplied to the brakes	example, see the Wiring Diagram above.
of the towed vehicle through	See also: "This proportion-based brake control features
said power switching circuit,	a compact size, a digital display and the ability to
and for generating a current	manage up to eight brakes at a time. The feature that
level signal representing the	sets the TriFlex apart from all others is its triple-axis
sensed level of braking current;	motion-sensing accelerometer. This integrated circuit
and	component allows the TriFlex to detect every motion of
	your vehicle and trailer with exact precision and to
	then apply the perfect amount of braking power for
	every situation."
	Investigation and testing of the accused product also
	shows the product has a current switching circuit as
	claimed. On information and belief, the software code
	and schematics for the products should be produced by
	Curt in discovery and will further demonstrate this
	element is met.

Claim Limitation

a microcontroller coupled to said input circuit, said display circuit, said current circuit, and to said power switching circuit, said microcontroller generating and supplying a switching control signal to said control input terminal of said power switching circuit thereby causing said power switching circuit to deliver a braking current to the brakes of the towed vehicle that is related to the brake level signal supplied to said microcontroller by said input circuit, said microcontroller illuminating one or more of said indicator lights of said display circuit to indicate a relative level of braking of the towed vehicle brakes and controlling one or more of said indicator lights to indicate that the towed vehicle brakes are or are not properly connected to said power

switching circuit.

Element on Infringing Product

Curt's website and instruction sheet state and show the product has a microcontroller as claimed. For example, see the Wiring Diagram and Digital Display above. See also: "This proportion-based brake control features a compact size, a digital display and the ability to manage up to eight brakes at a time. The feature that sets the TriFlex apart from all others is its triple-axis motion-sensing accelerometer. This integrated circuit component allows the TriFlex to detect every motion of your vehicle and trailer with exact precision and to then apply the perfect amount of braking power for every situation."

Investigation and testing of the accused product also shows the product has a microcontroller as claimed. On information and belief, the software code and schematics for the products should be produced by Curt in discovery and will further demonstrate this element is met.

104. Upon information and belief, Curt has had actual knowledge of the '352 patent and actual knowledge that its Infringing Brake Controllers infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Brake Controllers. Upon information and belief, Curt knew about the '352 patent prior to this lawsuit at least because Curt and Horizon are head-to-head

competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's brake controller products, which are marked with the '352 patent in accordance with 35 U.S.C. § 287(a), and given the May 30, 2000 issuance of the '352 patent that covers the products.

- 105. Each of the Infringing Brake Controllers' only commercial use is a brake controller.
- 106. Any use of the Infringing Brake Controllers as a brake controller is an act of direct infringement of the '352 patent.
- 107. Because the sole intended use of the Infringing Brake Controllers is an infringing use, the Infringing Brake Controllers have no substantial non-infringing uses.
- 108. Curt has induced infringement of the '352 patent at least because, with knowledge of the '352 patent, it intentionally and actively induced end users of the Infringing Brake Controllers (through instructions, videos, and otherwise) to use them in a manner that infringes the '352 patent with specific intent that they do so.

- 109. Curt has further induced infringement of the '352 patent at least by selling the Infringing Brake Controllers to distributors, retailers, and other resellers with specific intent that they infringe the '352 patent by reselling the Infringing Brake Controllers to others.
- curt has contributed to infringement of the '352 patent at least by selling the Infringing Brake Controllers, which have no substantial use other than an infringing use as a brake controller.
- 111. Curt's infringements of the '352 patent were, and continue to be, willful and deliberate.
- 112. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

Count Eight

Infringement of the '780 patent

- 113. Horizon incorporates by reference all allegations in all preceding paragraphs of this complaint as if fully rewritten herein.
- 114. Curt has directly infringed, and continues to directly infringe, the '780 patent at least by selling, offering to sell, using, making and/or importing the Infringing Brake Controllers described above.

115. As an illustrative example shown below, part no. 51140 (which functions in materially the same way as the other Infringing Brake Controllers) has each of the limitations in claim 1 of the '780 patent. The drawings in the chart are copied from Curt's Installation Instructions for the product (available at https://assets.curtmfg.com/masterlibrary/51140/installsheet/CME_51140_INS.PDF).

Claim Limitation	Element on Infringing Product	
1. A method for controlling	Curt's website (http://www.curtmfg.com/part/51140)	
brakes on a trailer being towed	and the name of the product itself confirm that the	
by a towing vehicle, comprising:	controller controls brakes on a trailer being towed by a	
	towing vehicle.	
sensing rate of deceleration of	Curt's website states the product senses rate of	
one of the towing vehicle and	deceleration as claimed. For example: "This	
the trailer;	proportion-based brake control features a compact	
	size, a digital display and the ability to manage up to	
	eight brakes at a time. The feature that sets the TriFlex	
	apart from all others is its triple-axis motion-sensing	
	accelerometer. This integrated circuit component	
	allows the TriFlex to detect every motion of your	
	vehicle and trailer with exact precision and to then	
	apply the perfect amount of braking power for every	
	situation. The TriFlex also automatically adjusts brake	
	output when going up or down a hill and is compatible	
	with anti-lock brakes and cruise control."	
	Curt's instruction sheet also states, for example,	
	"Automatically compensates for uphill and downhill	
	road conditions."	
sensing inclination of one of the	Curt's website and instruction sheet state the product	
towing vehicle and the trailer;	senses inclination as claimed. For example, see above.	
generating a variable	Curt's website and instruction sheet state the product	
deceleration signal as a function	generates a variable deceleration signal as claimed. For	
of said rate of deceleration and a	example, see above.	
variable inclination signal as a		
function of said sensed		
inclination;		

Claim Limitation	Element on Infringing Product
sending a brake amperage	Curt's website and instruction sheet state the product
output signal to control the	sends a brake amperage output signal as claimed. For
brakes on the trailer; and	example, see above.
continuously proportioning said	Curt's website and instruction sheet state the product
brake amperage output signal in	continuously proportions as claimed. For example, see
accordance with both said	above.
deceleration and said	
inclination signals.	

the '780 patent and actual knowledge that its Infringing Brake Controllers infringe that patent when they are manufactured, used, imported, sold, or offered for sale. Yet Curt has continued to sell the Infringing Brake Controllers. Upon information and belief, Curt knew about the '780 patent prior to this lawsuit at least because Curt and Horizon are head-to-head competitors in the hitch product market and towing industry and, upon information and belief, Curt has been monitoring Horizon's products, its marketing, and related patent activities, so that Curt was undoubtedly aware of Horizon's brake controller products, which are marked with the '780 patent in accordance with 35 U.S.C. § 287(a), and given the January 11, 2000 issuance of the '780 patent that covers the products.

117. Each of the Infringing Brake Controllers' only commercial use is a brake controller.

- 118. Any use of the Infringing Brake Controllers as a brake controller is an act of direct infringement of the '780 patent.
- is an infringing use, the Infringing Brake Controllers have no substantial non-infringing uses.
- because, with knowledge of the '780 patent, it intentionally and actively induced end users of the Infringing Brake Controllers (through instructions, videos, and otherwise) to use them in a manner that infringes the '780 patent with specific intent that they do so.
- by selling the Infringing Brake Controllers to distributors, retailers, and other resellers with specific intent that they infringe the '780 patent by reselling the Infringing Brake Controllers to others.
- by selling the Infringing Brake Controllers, which have no substantial use other than an infringing use as a brake controller.
- 123. Curt's infringements of the '780 patent were, and continue to be, willful and deliberate.

124. Horizon has been damaged by Curt's infringing activities, and it will continue to be irreparably injured unless the infringing activities are enjoined by this Court.

Prayer for Relief

WHEREFORE, Horizon prays for judgment against Curt as follows:

- (A) A finding that Curt has directly infringed one or more claims of the '583, '713, '863, '142, '352, and '780 patents under 35 U.S.C. § 271(a).
- (B) A finding that Curt has induced infringement of one or more claims of each of the Patents under 35 U.S.C. § 271(b).
- (C) A finding that Curt has contributed to the infringement of one or more claims of each of the Patents under 35 U.S.C. § 271(c).
- (D) Preliminary and permanent injunctive relief enjoining Curt and its officers, directors, managers, employees, affiliates, agents, representatives, parents, subsidiaries, successors, assigns, those in privity with them, and all others aiding, abetting, or acting in concert or active participation therewith, from: (1) making, using, selling, offering to sell, or importing into the U.S. any device covered by any of the Patents; or (2) otherwise directly or indirectly infringing any of the Patents.
 - (E) Compensatory damages under 35 U.S.C. § 284.

- (F) Treble damages under 35 U.S.C. § 284.
- (G) An order that Curt accounts to Horizon for all sales, revenues, and profits derived from its infringing activities and that three times those profits be disgorged and paid to Horizon under 35 U.S.C. § 284.
 - (H) Attorneys' fees under 35 U.S.C. § 285.
 - (I) Pre-judgment and post-judgment interest.
 - (J) Costs of the action.
- (K) Such other and further relief as allowed at law or in equity that the Court deems to be appropriate.

Dated: March 9, 2018

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Counsel for Horizon Global Americas Inc.

<u>Jury Demand</u>

Plaintiff Horizon Global Americas Inc. hereby demands a jury trial for all issues so triable.

<u>s/ David B. Cupar</u> Counsel for Horizon Global Americas Inc.

Certificate of Service

The undersigned certifies the above paper was served on counsel for defendant via the Court's ECF system on March 9, 2018.

Michael J. Huget Sarah E. Waidelich HONIGMAN LAW FIRM

Counsel for defendant Curt Manufacturing, LLC

<u>s/ David B. Cupar</u>
One of the Attorneys for plaintiff
Horizon Global Americas Inc.